

KOS DAN FAEDAH PEMBANGUNAN SISTEM
MAKLUMAT GEOGRAFI UNTUK SISTEM
PENTADBIRAN KADARAN MAJLIS
PERBANDARAN SANDAKAN

JOHNY BIN RONGGITOM

UNIVERSITI TEKNOLOGI MALAYSIA

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ABSTRAK

Analisis kos faedah (*Cost Benefit Analysis - CBA*) adalah satu kaedah penilaian pelaburan yang diguna pakai sebagai garis panduan penilaian program pembangunan (GPPPP) oleh agensi-agensi kerajaan di Malaysia termasuk pihak berkuasa tempatan (PBT) di bawah Surat Pekeliling Am Bil. 3 Tahun 2005. Dalam kajian ini CBA digunakan untuk menilai pelaburan terhadap pembangunan sistem maklumat geografi (*Geographic Information System - GIS*) untuk sistem pentadbiran kadaran Majlis Perbandaran Sandakan (MPS). Kos-kos dan faedah-faedah pembangunan GIS yang diperolehi dibandingkan dengan kos-kos dan faedah-faedah alternatif lain iaitu alternatif sedia ada (*status quo*) dan alternatif penambahbaikan sistem sedia ada. Tujuan membandingkan kos-kos dan faedah-faedah tersebut ialah untuk menentukan daya maju kewangan dan ekonomi setiap alternatif tersebut sebagai asas membuat keputusan berkualiti untuk memilih alternatif yang paling sesuai, cekap, berkesan dan berdaya maju. Kesemua sepuluh metodologi kajian ini telah dijalankan dengan empat metodologi yang paling penting, iaitu: (a) model GIS; (b) anggaran kos; (c) anggaran faedah; dan (d) CBA itu sendiri. Keputusan akhir kajian ini menunjukkan bahawa nilai kini bersih alternatif pembangunan GIS adalah paling tinggi iaitu sebanyak RM44.43 juta dan tempoh pulangan balik modal ialah 2 tahun 0.5 bulan. Nisbah faedah kepada kos dan nisbah kenaikan faedah kepada kos bagi alternatif pembangunan GIS juga paling tinggi iaitu masing-masing 13.22 dan 3.47. Manakala perbandingan nilai relatif bagi kedua-dua faedah kuantitatif dan kualitatif bagi alternatif ini menunjukkan nilai tertinggi, iaitu 3.36. Hasil kajian menunjukkan bahawa alternatif pembangunan GIS adalah pilihan terbaik dan sesuai diaplikasikan untuk sistem pentadbiran kadaran MPS berdasarkan kepada nilai terdiskaun bersih dan nisbah-nisbah faedah kepada kos yang paling tinggi bagi faedah kuantitatif dan kualitatif.

ABSTRACT

Cost Benefits Analysis (CBA) is an appraisal investment method that serves as a Valuation Development Program Guideline for government in Malaysia including Local Government under *Surat Pekeliling Am Bil. 3 Tahun 2005*. In this research CBA is used to appraise the capital investment on system development in Sandakan Municipal Council's assessment administration. The costs and benefits of Geographic Information System (GIS) development attained is compared with the cost and benefits from other alternatives which is the current status quo and the current improvable alternative system. The purpose of comparing the costs and benefits are to determine the financial liability and economy in every alternative, which serve as the foundation in making a quality decision in selecting the most suitable, competent, efficient and capable in the process of development. All ten methodologies had been carried out with the four most important methods: (a) GIS model; (b) costs estimation; (c) benefits estimation; and (d) CBA itself. The final result of this research that the net present value of GIS development alternatives shows the highest with the amount of RM44.3 million and payback period is 2 years and 0.5 month. Ratio benefits to costs and ratio increase benefits to costs for GIS development alternatives also the highest with 13.22 and 3.47 respectively. Meanwhile, the comparison relative value for both quantitative and qualitative benefits for GIS development also showed the highest, 3.36. The summary of this research shows that GIS development is the best and suitable application for administration assessment system in Sandakan Municipal Council based on the discounted gross value and the cost and benefits ratio shows the highest for quantitative and qualitative benefits.

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